APPENDIX III

SITE CLEAN UP

Each site is unique and requires an individual evaluation of the extent of clean up that needs to be done. The following suggests the kind of issues which need to be considered in making site specific clean up decisions.

There is always the potential for improperly disposed waste to have impacted groundwater resources. In such cases, groundwater remediation may be required as part of the site clean up. Some of the factors that need to be considered when assessing potential groundwater impacts and the need for clean up, include: What is the depth to groundwater at the site? What is the nature of the waste deposited there? Were liquid wastes ever buried at the site? Is the groundwater at the site used as a drinking water source? If so, what is the distance to the nearest drinking water well?

If the site has contaminated a drinking water supply well, then the site may also be violating the Federal Safe Drinking Water Act, 42 U.S.C.A.300f to 300j-26, and 40 CFR Part 141. Any impacts on groundwater resources in the area will affect the site-specific clean up requirements.

If a site is located in or adjacent to an arroyo, wash, intermittent stream bed, river bed, pond, or lake, then the potential for surface water contamination exists and the site may be in violation of the Federal Clean Water Act (CWA), 33 U.S.C.A. 1251-1387, and 40 CFR Part 230. If the site is located in a surface water feature that meets the definition of a "navigable water" or a "water of the United States," as defined in 502 of the CWA and 40 CFR Part 230.3, then the site may be an unpermitted fill of these waters and require clean up.

If any nearby surface waters are classified as "navigable waters" or as "waters of the United States", as defined in Section 502 of the CWA and 40 CFR Parts 116.3 and 117.1, the site may be in violation of the CWA for discharging waste/fill material or hazardous substances, as defined in 40 CFR Part 116, to these waters.

Some basic questions that need to be asked include: Is there evidence that wastes have been washed into these waters? Do the site surface water run-off features drain toward the nearby waterways? Is there evidence of visibly contaminated water draining to the adjacent waterways? If the answers to any of these questions is yes, then a more comprehensive site assessment program and clean up effort may be required. Any work, including clean up, that occurs within a jurisdictional water of the United States may require a consultation with the Army Corps of Engineers to determine if a Section 404 permit is required. If there are known endangered species in the area, this information needs to be factored into the clean up process. The presence of endangered species may also affect the actual clean up work by requiring mitigation measures for impacted species.

Appropriate clean up activities for contaminated soils depend upon whether the soil has or may impact groundwater or surface water and on the intended reuse of the property. Contaminated sites whose reuse may be for home or school construction could require a greater degree of soil clean up than property which will be left as open space. The potential or actual impacts to groundwater or property reuse will effect the amount of soil clean up needed at a site. An alternative to a complete clean up of contaminants may be permitted through appropriate and enforceable land use restrictions on the property (institutional controls).

Sites on land other than Indian lands must meet applicable state and federal regulations. It is therefore recommended that decision-makers seek the advice and assistance of the state agencies and the federal EPA in developing criteria for determining the appropriate level of remediation for a specific site. It is also advisable to determine whether sampling will be necessary to insure complete removal of wastes, some of which may have migrated below the surface.